

Work Order ID 135447

Wednesday, August 12, 2015 4:28:57 PM

646.3110
B 135447
REV. N/C

135447

Page 1

Item ID: 646.3110

Revision ID:

Item Name: Channel

Start Date: 8/12/15

Start Qty: 6.00

6

Required Date: 8/12/15

Req'd Qty: 6.00

6

Reference:

Accept

N900040100

Setup Start

NS1

Stop

NS2

Cust Item ID:

Customer:

Approvals:

Process Plan: MLJ

Date: AUG 14 2015

Tooling:

Date: _____

QC: _____

Date: _____ SPC (Y/N): _____

Date: _____

Run Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr	Revision Nbr
646.3100	N/C

100

100

Bandsaw

Jeaspa Bandsaw

BAND SAW

Memo

Cut Blank at 15.00"

0.00

0.01

6 1 15/09/01

110

110

HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

Memo

1-Machine per folio FB145

DWG REV: AA

FOLIO REV: N/C

0.03

0.03

6 2 15/09/02

2- deburr and break all sharp edges

NCR

DQA:

Date:

15/09/22



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

15/09/14

Work Order update only ☐

Work Order: <u>135 447</u> Part No. <u>646.3110</u> NCR No. <u>15-5321</u>		DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☒ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date: <u>15/09/02</u>		Step #: <u>110</u>		QTY Effective: <u>2</u>		MRB (QS1042) Approval <u>Aut</u> 15/09/02			
Description Work Order Deviation				Disposition					
measure 0,880 is under tolerance Due to the piece lifting in Set-up while Machining Re → dig malfunction				Replaced 2x M7075 T6 B1,500 x 1.500 M 132693 → Make a new jig before running next batch → Update folio					
				Completed By <u>WSP</u> 15/09/02 Lead hand / Supervisor Approval Verification <u>AS</u> 15/09/02 DAS 08 QC / QA Coordinator Approval DAS 9 9-89 15-09-02					
Root Cause Environment ☐ No Re-verification ☐ Design ☐ Operator ☒ Doc/Data ☐ Offset/Setup ☒ Equip/Tooling ☒ Supplier ☐ Handling/Pre ☐ Training ☐ Material ☐ Use for Testing ☐ Internal Transport ☐ Poor Information ☐ Tribal Knowledge ☐ Rushing ☐ LOA ☐ Product Improvement ☐ Substation ☐ Process Improvement ☐ Past Expiry Date ☐ Manufacturing Process ☐ Misidentified ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ ☒ Part Moved Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
OTHER :									

Work Order ID 135447

135447

Page 2

Wednesday, August 12, 2015 4:28:57 PM

Item ID: 646.3110 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Channel
 Start Date: 8/12/15 Start Qty: 6.00 ***6*** Cust Item ID:
 Required Date: 8/12/15 Req'd Qty: 6.00 ***6*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC2- Inspect parts off machine FAI/FAIB	0.00							
120						6	2		15/09/02
QC	Memo	0.00							
Quality Control									
130	QC8- Inspect parts - second check	0.00							
130						6	0		DAS 08 9-89
QC	Memo	0.00							
Quality Control									
140	Outsource process-Anodize per QSI017 4.1.10.1	0.00							
140						6		SEP 03 2015	CZ
Outsource4	Memo	7.20							
Outsource process - Anodize	Issue P/O to ATG : 29687								
	1- Black Anodize as per Dwg 646.3100								
	2- PRIME AS PER DWG, SEE NOTE #2								
	Certification of Conformity is required								

DI

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

Q/

QA Closed: _____ Date: _____

Work Order update only ☐

V

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Water Jet ☐ Engineering ☐ Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Quality ☐ Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐ Large Fab ☐ Composite ☐ Supplier ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ No Re-verification ☐ Design ☐ Operator ☐ Doc/Data ☐ Offset/Setup ☐ Equip/Tooling ☐ Supplier ☐ Handling/Pre ☐ Training ☐ Material ☐ Use for Testing ☐ Internal Transport ☐ Poor Information ☐ Tribal Knowledge ☐ Rushing ☐ LOA ☐ Product Improvement ☐ Substation ☐ Process Improvement ☐ Past Expiry Date ☐ Manufacturing Process ☐ Misidentified ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Temperature/Cure ☐ Power Loss/Surge ☐ Positioned Wrong ☐ Bending ☐ Set-up ☐ Folio/Program ☐ Outside Dimensions ☐ Centre Not Concentric ☐ BOM/Route ☐ Grain ☐ Over/Under tolerance ☐ Cracks ☐ Broken/Damage/Defect ☐ Weld ☐ Part Incorrect ☐ Crimp/Kink/Ripple/Wave ☐ Inspection Incomplete/Unqualified ☐ Wrong Stock Pulled ☐ Part Lost/Missing ☐ Cuffs ☐ Contamination ☐ Out of Sequence ☐ Part Moved ☐ Crushing ☐ Countersink ☐ Off-set ☐ Drawing ☐ Heat Treat ☐ Cut Too Short ☐ Mislabeled ☐ Finish ☐ Wave/Twist in Tube ☐ Instructions Incomplete/Unclear ☐ Fit/Function ☐ Misread ☐ Marks/Chatter ☐ Drill Holes ☐ Misaligned/off center ☐ Turning Sequence ☐							
		OTHER :							

H:

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev I

Picklist Print

Wednesday, August 12, 2015 4:28:57 PM

Page 1

Work Order ID: 135447

135447

Parent Item: 646.3110

646 3110

Parent Item Name: Channel

Start Date: 8/12/15

Required Date: 8/12/15

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP REV:A NEW ISSUE 12-10-24 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M7075T6B1.500X1.500

Purchased

No

f

25.3370

7.894737

M7075T6B1 500X1 500

7075 T6 BAR 1.500 x 1.500

15/08/02

Location

Loc Qty

Loc Code

MAT006

25.337

M131357

1.337

M132693

24

7,531

+ 2,516

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

DART AEROSPACE LTD		Work Order: 135447
Description: Channel		Part Number: 646.3110
Inspection Dwg: 646.3100 Rev: N/C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
14.60	+/-0.010	14.603	✓		31006	Height gauge
13.13	+/-0.010	13.130	✓		...	...
0.09	+/-0.010	0.093	✓		MJP-04	vern
0.47	+/-0.010	0.480	✓		↓	↓
0.75	+/-0.010	0.750	✓		↓	↓
83°	+/-0.5°	83°	✓		MJP-06	SQUARE
0.88	+/-0.010	0.877	✓		MJP-04	vern
0.645	+/-0.005	0.646	✓		...	...
0.11	+/-0.010	0.110	✓		118-120	Mic
0.12	+/-0.010	0.117	✓		MJP-04	vern
Ø0.209	+0.005/-0.001	0.211	✓		...	...
0.409	+/-0.005	0.409	✓		...	...
0.420	+/-0.002	0.420	✓		31006	Dial Height gauge
2.188	+/-0.002	2.188	✓		...	...
2.188	+/-0.002	2.187	✓		↓	↓
2.188	+/-0.002	2.187	✓		↓	↓
2.187	+/-0.002	2.186	✓		↓	↓
0.785	+/-0.002	0.784	✓		↓	↓
2.395	+/-0.002	2.395	✓		↓	↓
0.669	+/-0.002	0.669	✓		↓	↓
0.372	+/-0.002	0.370	✓		↓	↓
0.334	+/-0.002	0.332	✓		↓	↓
0.175	+/-0.002	0.175	✓		↓	↓
0.130	+/-0.002	0.130	✓		↓	↓

Measured by: <i>[Signature]</i>	Audited by: <i>[Signature]</i> DAS	Preliminary Approval:
Date: 15/09/02	Date: 15/09/02 08 9-89	Date:

Rev	Date	Change	Revised by: <i>[Signature]</i>	Approved
A	13.09.17	New Issue	KJ	<i>[Signature]</i>

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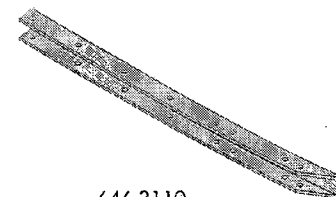
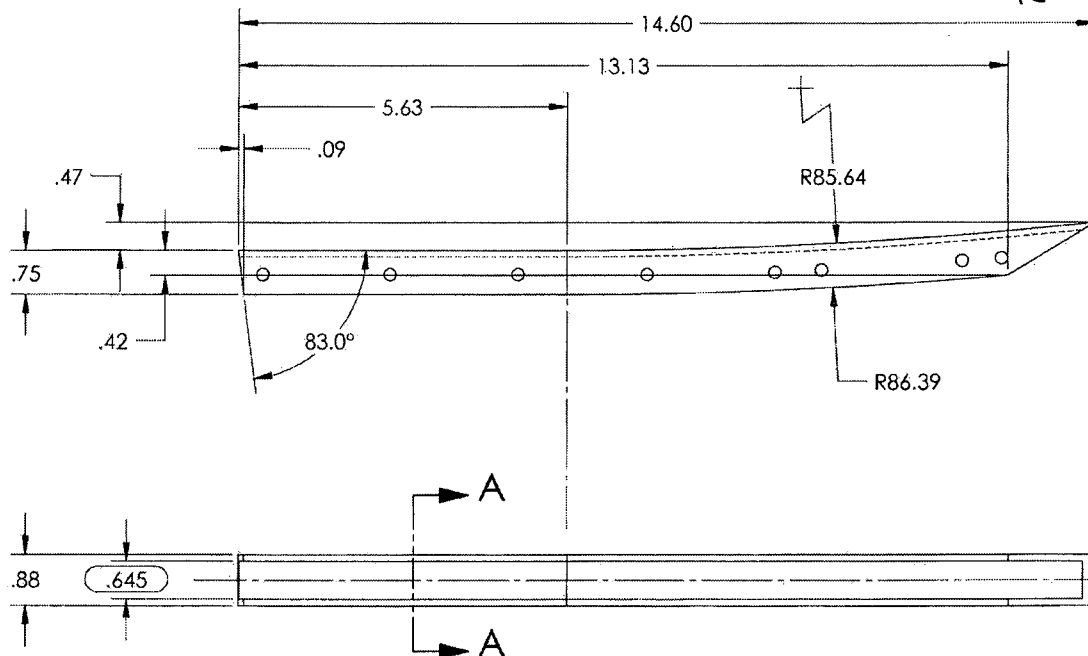
NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 AMS-QQ-A-225/9
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III CLASS 2, COLOR BLACK;
CARDINAL 4860-50 PRETREATMENT PRIMER; PRIME IAW MIL-P-23377J TYPE I CLASS N
- 3 DEBURR AND BREAK ALL SHARP EDGES
- 4 IDENTIFY IAW MPP-120

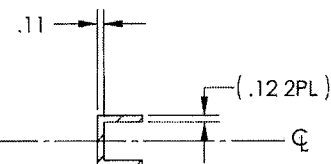
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 135443 M.C.J.
15-08-14

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



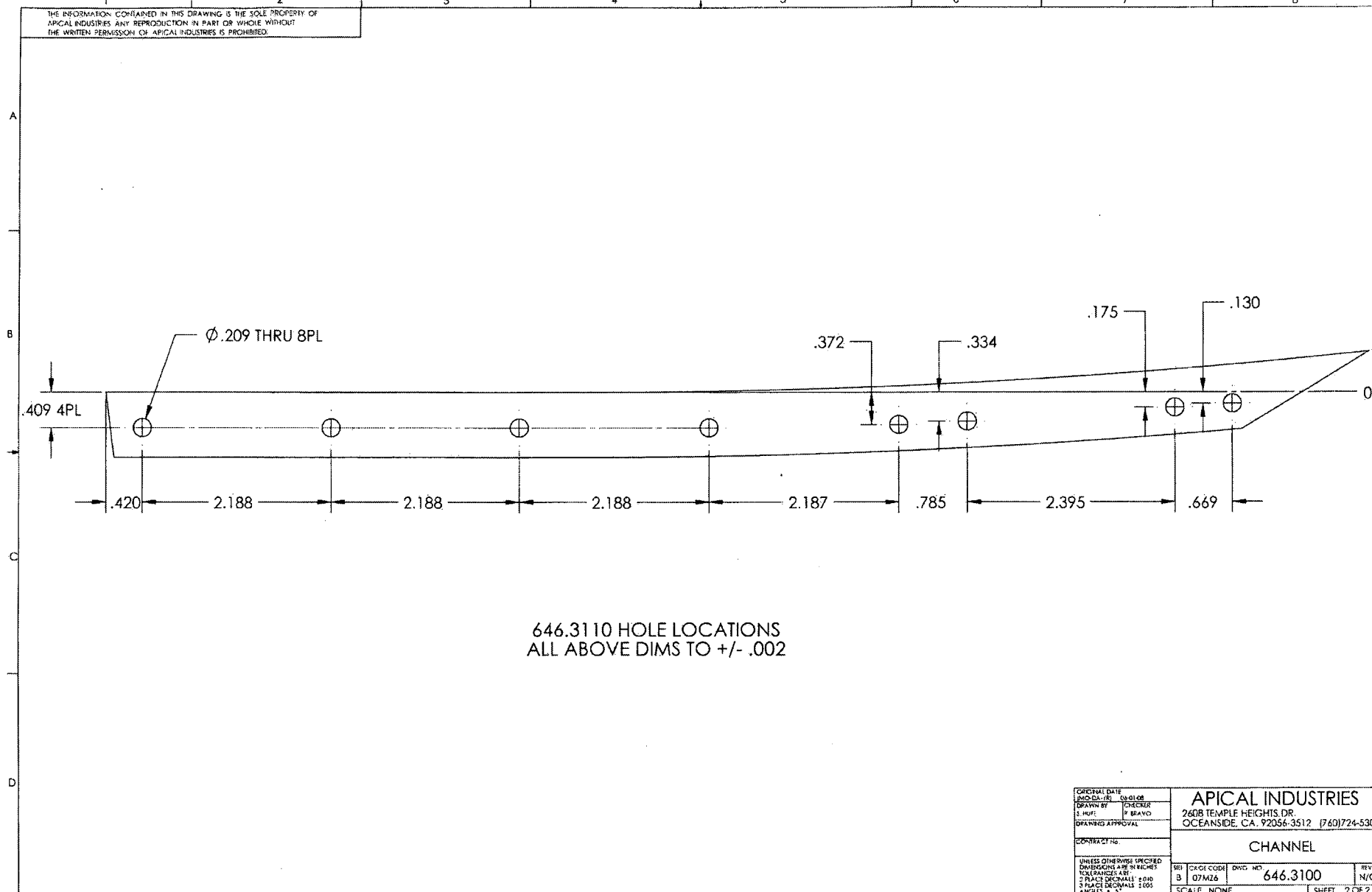
646.3110



SECTION A-A

FIND #		646.3110	CHANNEL	MATERIAL		SPEC.
QTY		PART #	DESCRIPTION	PARTS LIST		
NEXT ASSY (S)		646.4000	646.4000	APICAL INDUSTRIES		
646.4000		646.4000	646.4000	2608 TEMPLE HEIGHTS DR.		
646.4000		646.4000	646.4000	OCEANSIDE, CA. 92056-3512 (760)724-5300		
646.4000		646.4000	646.4000	CHANNEL		
646.4000		646.4000	646.4000	SCALE NONE		
646.4000		646.4000	646.4000	SHEET 1 OF 2		

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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO29687**

Purchase Order Date 9/3/2015

PO Print Date 9/8/2015

Page Number 2 of 3

Order From :

VC-ATG001

Ship To : DART AEROSPACE LTD

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

613-446-4544

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Ship To Contact

Ship To Phone

Ship Via:

VENDOR'S TRUCK

Ship Acct:

Line Total: \$132.00

4 134447

646.3110 CHANNEL
REV. N/C

9/9/2015

6.00

\$10.65

\$63.90

Yes

9/9/2015

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

Line Total: \$63.90

5 131242

647.9610 WIPER
DEFLECTOR REV. N/C

9/9/2015

2.00

\$16.05

\$32.10

Yes

9/9/2015

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

Line Total: \$32.10

6 135537

646.3715 STRUT
DOUBLER REV. A

9/9/2015

6.00

\$6.25

\$37.50

Yes

9/9/2015

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

Note:

9/8/2015



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 63904

Date: 10-Sep-15

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity	Description		
18 ea	Part: 646.3715 STRUT DOUBLER HARD ANODIZE BLACK AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20150670 PO: PO29687 Line:	Rev: A	
16 ea	Part: 646.3718 CUSTOM WASHER HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 PRIME MIL-P-23377J TYPE I CLASS N PAINT IS SUPPLIED BY CUSTOMER Job: 20150671 PO: PO29687 Line:	Rev: A	
20 ea	Part: 650.9201 EYELET BRACKET HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 PRIME MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY CUSTOMER Job: 20150672 PO: PO29687 Line:	Rev: A	
6 ea	Part: 646.3110 CHANNEL HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20150673 PO: PO29687 Line:	Rev:	SP 15-09-10
2	Part: 647.9610	Rev:	



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 63904

Date: 10-Sep-15

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

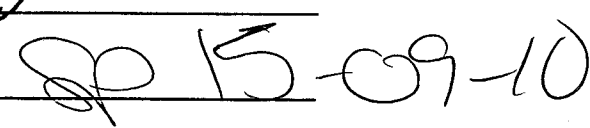
DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity	Description		
ea	WIPER DEFLECTOR HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 PRIME MIL-P-23377J TYPE I CLASS N PAINT IS SUPPLY BY CUSTOMER Job: 20150674 PO: PO29687 Line:		
Certificate of Conformance A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order. ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY DATE: <u>10/9/15</u> CERTIFIED SIGNATURE: <u></u> RECEIVER SIGNATURE: <u></u>			